Saints Pères Neuroscience Seminar Series

Friday, September 6th, 2019 at 11:30

Salle des Conférences (R229)

Centre Universitaire des Saints-Pères

45 rue des Saints-Pères, 75006 Paris

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Functional organization of the mammalian tactile sensory system: a view from the periphery

The sense of touch is key to our experience of the world around us, but unraveling the neural pathways underpinning this key sense has been a challenge. Research in my laboratory uses the mouse as a model system to address the development, organization, and function of neural circuits that underlie the perception of touch and pain, in health and disease. In this lecture, I will describe the range of mouse genetic tools we have generated that enable interrogation of the major physiologically distinct classes of low-threshold mechanosensory neurons (LTMRs), which are the primary cutaneous sensory neurons that mediate our sense of touch, as well as nociceptors, which detect painful stimuli. I will also describe a complementary set of genetic tools useful for studying spinal cord interneuron and projection neuron subtypes. These somatosensory nervous system tools have enabled visualization, targeted in vitro and in vivo electrophysiological recordings and imaging, and functional manipulation of LTMRs as well as dorsal horn and brainstem LTMR circuit components that underlie the sense of touch. I will then present recent work aimed at defining a conceptual framework for understanding how ensembles of LTMR activities are integrated and processed in the spinal cord and brainstem, and new insights into the properties and brain targets of ascending spinal pathways that underlie discriminative and affective touch.

Those interested in meeting with the speaker please contact

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